

SECTION 1431

HYDROSTATIC PRESSURE TESTING OF WATER FACILITIES

1431.0100 GENERAL

1431.0101 Description of Work. The work under this Section shall consist of furnishing all labor, materials, and equipment required to hydrostatically test water facilities in accordance with the requirements of these specifications. The Contractor shall provide a calibrated pump suction tank for the test pressure pump. Water line to be tested shall pass a pretest conducted by the Contractor before the official test is scheduled.

1431.0300 EXECUTION

1431.0301 General. All new water line installations—including services, fire hydrants, and reclaimed water lines—shall be subjected to a hydrostatic pressure test. In the event the new water line requires connection to an existing line to fill the new line with water, the connection between the existing and new lines shall be broken and the new line plugged prior to commencing the test, unless prior approval is received from the Engineer (see TW Standard Detail 1809).

Hydrostatic pressure testing of all water lines, including reclaimed water lines, shall be conducted with potable water only. Air testing is not allowed.

The Contractor shall furnish all material, equipment, and labor necessary to perform the hydrostatic pressure test with the exception of the pressure gauge, which shall be provided by the Engineer. These components shall be considered incidental to the construction and testing of the water line.

Hydrostatic pressure testing shall be conducted upon completion of backfill and installation of thrust restraints.

Hydrostatic testing shall not be conducted against existing valves unless written approval is issued by the Engineer. However, it is understood by the Contractor that such acceptance shall in no way relieve the Contractor of responsibility for damage to lines, valves, or appurtenances caused by the test. Furthermore, the Agency assumes no risk, liability, or obligation of any kind regarding the condition of existing facilities or any connection the Contractor may make to said facilities. Any damage to new or existing water facilities resulting from hydrostatic testing shall be repaired at the Contractor's sole cost.

All sections of newly installed water line shall be inspected to ensure all entrapped air has been completely expelled from the pipe, valves, and hydrants. If permanent air-release outlets are not located at all high points, the Contractor shall install additional air-release ports as may be necessary or as directed by the Engineer. Air release valves are for air removal only, and shall not be installed until after the pipeline has been tested, or new ball valves shall be closed to isolate the air release valves during test; see Subsection 1413.0302(D).

SECTION 1431

For concrete cylinder pipe, the Contractor shall specify and require the pipe supplier to include an appropriate number of outlets for the removal of trapped air. The location of the outlets shall be shown on the shop drawings. The cost of these outlets shall be considered incidental to the cost of the pipe and testing.

The test pump may be either hand or motor driven, and shall be connected to the water line under test only through a tap into the main.

1431.0302 Hydrostatic Testing. Hydrostatic testing shall be conducted only after all new work has been installed and only in the Engineer's presence. The hydrostatic test pressures specified herein shall be maintained for a period of 2 hours.

Unless otherwise noted in the special specifications, on the plans, or as directed by the Engineer, test pressures shall conform to the following requirements.

**Table 1431-1
Minimum Hydrostatic Test Pressure Requirements**

Pipe	Minimum Test Pressure
DIP (includes all components)	200 psi
PVC (includes all components)	200 psi

Acceptance shall be determined on the basis of zero allowable leakage. Should any test of installed pipe disclose leakage measured by a drop in pressure, the Contractor shall—at no additional cost to the Agency—locate and make repairs approved and inspected by the Engineer, until there is no drop in pressure for the minimum 2-hour test. Retesting of segments shall be with the identical test boundaries used for the initial test. The Contractor shall repair all visible leaks, regardless of the amount of leakage.

HDPE testing will be in accordance with Section 1403.